40 CFR 761 PCB REMEDIATION PLAN NOTIFICATION

Former New England Metals Recycling Site

Portland, Maine

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COMMITMENT & INTEGRITY DRIVE RESULTS

226512.00
City of Portland
March 2013

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March 29, 2013

Ms. Kimberly Tisa
PCB Coordinator
U.S. Environmental Protection Agency Region 1
5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

Re: **Self-Implementing Cleanup and Disposal Plan under 40 CFR 761.61(a)**
Former New England Metal Recycling Site
25 Somerset St., Portland, Maine

Dear Ms. Tisa:

On behalf of the City of Portland, Maine (City), please find attached a Self-Implementing Cleanup and Disposal Plan (Plan) prepared to comply with U.S. Environmental Protection Agency (EPA) requirements under 40 CFR 761.61(a). This Plan details the proposed remedial approach for polychlorinated biphenyl (PCB) remediation waste materials encountered at the former New England Metal Recycling (NEMR) facility located at 25 Somerset St. in Portland, Maine (Site).

The 0.85-acre Site was used as a metal recycling facility from the early 1900s until 2010. Historic environmental investigation at the Site was performed as part of the Portland Brownfields Project. The Site is currently underutilized and therefore scheduled for redevelopment after Site cleanup activities are completed. A 0.19-acre portion of the Site will be finished as a paved public roadway. The remaining 0.66-acre portion of the Site and several adjacent parcels will be sold to Legacy Park Apartments, LLC (Legacy) for mixed-use redevelopment to include an above-ground parking structure, a high-rise building for retail and residential use, and a landscaped open space. It is the City's intent to maintain ownership of the complete 0.85-acre Site throughout the duration of PCB remediation activities proposed herein, and to certify the completion of these activities.

The PCB contamination is believed to be a result of capacitor releases from scrapped automobiles and white goods. The nature and extent of PCB contamination of the Site is summarized as follows:

- Investigations for PCBs in soil were performed at targeted locations across the Site, with a 40 CFR 761 Subpart N sampling grid implemented for further delineation at locations reported with elevated results. As a result of these characterization activities (over 100 samples collected), PCBs have been detected in surface soils at concentrations > 10 mg/kg at four locations within the Site boundaries.

- Investigations for PCBs in concrete were performed at evenly distributed locations across a large concrete pad. PCBs have been detected pad at concentrations ≤ 1 mg/kg in 19 samples collected from the surface of the pad.

Based on these characterization results and the scope of the proposed redevelopment, the following activities are proposed for the management of PCB remediation waste at the Site:

- Soils containing PCBs > 10 mg/kg will be excavated for off-site disposal; verification of the 10 mg/kg cleanup level will be performed through 40 CFR 761 Subpart O sampling;

- The concrete pad containing PCBs ≤ 1 mg/kg will be broken up and left in place as structural fill material;

- Soils and concrete containing PCBs ≤ 10 mg/kg will be left in place beneath a compacted soil cap meeting the requirements of 40 CFR 761.61(a)(7); based on the proposed future use of the Site, a high-occupancy cleanup level of 10 mg/kg is applicable to the Site under 761.61(a)(4)(i)(A). In addition, approximately 4 feet of imported clean fill materials will be placed on top of the cap to raise the overall grade of the Site to meet redevelopment objectives; and

- A deed restriction will be prepared and recorded at the Cumberland County Registry of Deeds as described in 40 CFR 761.61(a)(8).

Pending your review and approval, the City is planning to commence the work proposed in this Plan in the spring of 2013. A target completion date for these remediation activities has been set for the summer of 2013 in order to meet the project schedule established for the property transaction.

If you have any comments, questions, or require further information, please do not hesitate to contact me at the number listed above.

Sincerely,

WOODARD & CURRAN INC.

Amy Martin

Amy (Wallace) Martin, PE
Project Engineer

Enclosure(s)

cc: Nick Hodgkins, MEDEP
Gregory Mitchell, City of Portland
Richard Knowland, City of Portland
John Tewhey, Tewhey Associates
Karl Kasper, Woodard & Curran

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1. INTRODUCTION

The City of Portland, Maine (City) is the present owner of the former New England Metal Recycling (NEMR) facility located at 25 Somerset Street in Portland, Maine (Site). The 0.85-acre Site was used as a metal recycling facility from the early 1900s until 2010. Polychlorinated biphenyls (PCBs) detected in Site ground surface materials are attributed to historic capacitor releases from scrapped automobiles and white goods formerly located at the Site. The Site is currently underutilized and therefore scheduled for redevelopment after Site cleanup activities are completed as proposed herein. The location of the NEMR facility in the Bayside area of Portland is shown in Figure 1.

After completing the Site cleanup activities described herein, a 0.19-acre portion of the Site will be finished as a paved public roadway, and it is the City's intent to retain ownership of this portion of the Site for the foreseeable future. It is the City's intent to sell the remaining 0.66-acre portion of the Site and several adjacent parcels to Legacy Park Apartments, LLC (Legacy) for mixed-use redevelopment to include an above-ground parking structure, a high-rise building for retail and residential use, and a landscaped open space as depicted on Figure 2. It is the City's intent to maintain ownership of the complete 0.85-acre Site throughout the duration of PCB remediation activities proposed herein, and to certify the completion of these activities.

This self-implementing cleanup and disposal plan and the accompanying technical support documents represent the required notification to the U.S. Environmental Protection Agency (EPA) and the Maine Department of Environmental Protection (DEP) in accordance with Title 40, Subpart D, Part 761.61(a). This plan adheres to the EPA Region I Self-Implementing Cleanup and Disposal §761.61(a)(3) Checklist, dated September 27, 2011. The environmental consulting firms of Woodard & Curran of Portland, Maine and Tewhey Associates of Gorham, Maine have developed this plan on behalf of the City. John Tewhey of Tewhey Associates has been the Brownfields project manager for the City since 1997 and was the principal investigator for the exploration studies at the Site. Mr. Tewhey retired at the end of 2012 and terminated his 26-year consulting practice. Woodard & Curran has provided engineering services to the City of Portland since 2007 and collaborated with Tewhey Associates on the development of the Bayside Trail through the former rail yard (abutting the northwest boundary of the Site), and the exploration studies in July 2005 of the E. Perry metal recycling facility (abutting the northeast boundary of the Site).

The proposed schedule for implementation of remediation will begin no sooner than 30 days following submittal of this notification as described in 40 CFR 761.61(a)(3)(ii). It is anticipated that the excavation work will begin in the Spring 2013. The remediation, disposal and verification project is expected to be completed in the Summer of 2013.

2. SITE BACKGROUND AND PROPOSED REDEVELOPMENT

2.1 HISTORIC SITE USE

A metal recycling facility operated at the 25 Somerset Street site from the early 1900s until 2010. Sanborn maps from 1886 indicate that the Site consisted of tidal wetlands that had not yet been reclaimed from Back Cove. Historic topographic maps from 1918 indicate that the former wetlands beneath the Site had been filled and railroad tracks constructed on either side of the Site. Sanborn maps from the mid-1900s depict the site as a scrap metal yard within a rail yard with nearby freight-loading platforms. A Sanborn map from 1946 is provided as Figure 3.

The 0.85-acre parcel that became the NEMR Site was transferred from the Portland Terminal Co. to Philip Abbott in 1928 and then from Philip Abbott to Hyman Finkelman Inc. in 1939. The Site was operated as the H. Finkelman Inc. scrap metal yard for nearly 60 years. The Finkelman facility was purchased by Prolerized New England Co. of Everett, MA in the late 1990s and Prolerized was acquired by Schnitzer Steel Industries, Inc. of Portland, OR in 2007. The facility was known as New England Metal Recycling (NEMR) under Prolerized and Schnitzer. In anticipation of future development of the adjacent 6.5-acre rail yard, the City of Portland purchased the NEMR Site from Schnitzer in early 2009. In 2010-2011, Schnitzer moved the NEMR operations to a new state-of-the-art recycling facility on Riverside Street in Portland.

Tewhey Associates conducted interviews with long-time NEMR employees as part of a Phase I Environmental Site Assessment of the site for the City of Portland in early 2009. The interviews indicated that both ferrous and non-ferrous metals were received and processed at NEMR and its predecessor scrap yards. Automobiles and white goods comprised the bulk of metal received at the Site. An automobile compactor was located on a concrete platform in the northeast corner of the Site. There is no record or evidence of metal shredding having been done on the site.

Aerial photos taken in approximately 2004 (during active site operations) and in 2012 (after scrap materials had been cleared from the Site) are provided on the following page. Additional Site photographs taken in 2009 are provided in Appendix A.

2.2 REGULATORY HISTORY

A Phase I Environmental Site Assessment and Phase II studies of Site soils and a concrete pad were conducted by Tewhey Associates during the seven-year period from February 2006 to December 2012. These environmental investigation activities were completed in accordance with a series of Quality Assurance Project Plans (QAPP) developed for the Portland Brownfields Revitalization Project. The QAPPs were reviewed and approved by the USEPA Region 1 Brownfields Project Manager, Alan Peterson. A listing of environmental studies of the NEMR site and the adjacent rail yard conducted during the period 1997 to 2011 is provided in Appendix B.

In 2007, the Maine DEP accepted an application by the City of Portland for the Site and adjacent parcels to participate in the Maine DEP Voluntary Response Action Program (VRAP) in order to secure the environmental liability protections offered by that program. A copy of the VRAP application is included in Appendix C.


Approximate NEMR Site Boundary
©2004 Google


Fence bounding the NEMR Site
©2012 Google

2.3 SITE REDEVELOPMENT PLANS

An important goal of the Portland Brownfields project has been the assessment, remediation and redevelopment of the 6.5-acre former Portland Terminal Company rail yard and the adjacent 0.85-acre former NEMR scrap metal yard Site. In 2010, a collaboration of the City of Portland, the Trust for Public Land, and the Portland Trails organization completed the Bayside Trail System which extends from downtown Portland through Back Cove and around the eastern peninsula of Portland. An important portion of that trail extends through the former Portland Terminal Company rail yard abutting the northwestern boundary of the NEMR Site. At the rail yard location, the trail consists of brick walkways, large granite-paved assembly areas, and extensive plantings.

The City of Portland proposes to sell seven contiguous parcels within the former rail yard, including the former NEMR Site, to Legacy. Legacy is compelled by the City to initiate construction on the seven parcels within two years of purchase. Legacy intends to construct a multi-level residential facility and parking structure with first-floor retail space on a portion of the NEMR Site. From east to west, the Legacy project would consist of (1) the northward extension of Pearl Street over the easternmost 50 feet of the NEMR Site, (2) the development of a 145-foot wide multi-story residential structure on piles with a concrete slab foundation / ground floor, and (3) a 30-foot wide landscaped walkway between the residential structure and the adjacent multi-level structured parking facility, which will extend westward beyond the western boundary of the NEMR Site. A small triangular portion of the NEMR Site would be annexed to the Bayside Trail on the eastern end of the Site and a triangle of Bayside Trail land would be annexed to the Legacy development on the western portion of the Site. An overlay of the Legacy development plan superimposed on the NEMR Site is provided in Figure 4.

3. SITE CHARACTERIZATION ACTIVITIES

3.1 NATURE OF SITE CONTAMINATION

The PCBs found in shallow soils at the Site were reported as Aroclors 1242, 1248, 1254 and 1260. The source of PCB waste at the Site is considered to be capacitor releases from scrapped automobiles and white goods. The scrapping and scrap storage operations are known to have occurred at specific locations along the northern and eastern perimeter of the Site. This knowledge was used in the development of a focused sampling approach as presented herein. In addition to PCBs, the concentrations of lead, arsenic and polyaromatic hydrocarbons (PAHs) in shallow soil at the NEMR soil are similar to those found in soil on the adjacent 6.5-acre Portland Terminal Co. rail yard property.

3.2 CHARACTERIZATION DATA SUMMARY

A Phase I Environmental Site Assessment and Phase II studies of the NEMR Site were conducted by Tewhey Associates during the seven-year period from February 2006 to December 2012. A phased approach was necessary in order to conduct environmental investigations within a busy scrap metal handling facility. A total of 148 soil and concrete samples have been taken on the 0.85-acre Site during the Phase II Site investigation.

Samples collected for laboratory analysis during Phase II Site investigations were submitted under chain of custody protocol to Katahdin Analytical Services of Scarborough, Maine (Katahdin). PCB samples were extracted by USEPA Method 3550 and analyzed for PCBs by USEPA Method 8082. The laboratory analytical reports for the data presented herein as well as Katahdin's SOPs for extraction by USEPA Method 3550 and PCB analysis by USEPA Method 8082 are provided in CD format in Appendix D.

Select samples were submitted for laboratory analyses of other constituents of concern in addition to PCBs in support of overall Site characterization activities; these results are included in the attached laboratory analytical reports, but are not presented on the data summary tables referenced in this section.

3.2.1 Soil Investigation

Summary: Ten samples were collected at shallow depths during an initial boring investigation in February 2006. Analytical results ranged from non-detect (< 0.018 mg/kg) up to 64 mg/kg, with two results exceeding 10 mg/kg: 10.1 mg/kg and 64 mg/kg. During subsequent investigations, a total of 105 samples were collected from the upper 0-3 inches of soil. Analytical results ranged from non-detect (< 0.018 mg/kg) up to 270 mg/kg, with three results exceeding 10 mg/kg: 16.1 mg/kg, 105 mg/kg and 270 mg/kg.

Detailed Description of Investigation Phases:

- Initial Soil Boring Investigation
    - In February 2006, seven 1.5-inch diameter Geoprobe borings were advanced to depths ranging from 2 to12 feet below ground surface (bgs). Three hand-dug test pits were advanced to a depth of 1 foot in areas where the drill rig encountered shallow refusal due to metal debris. The sample locations were selected on the basis of (1) accessibility of the drill rig to the metal storage areas of the Site and (2) the desire to obtain initial characterization data from all areas of the parcel. Eleven soil samples were taken at shallow depths. Nine of eleven samples were composite samples taken from 0 to12 inches depth. Samples were obtained via split spoon sampling in borings and via hand sampling in test pits. The soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), PCBs, diesel range organics (DRO), gasoline range organics (GRO), and 11 metals. Six of ten samples were non-detect for PCBs at the applicable PQLs. The four detections occurred in areas of the Site that had been used for scrap metal storage

and processing, with total PCB concentrations reported at 0.90, 1.44, 10.1, and 64 mg/kg. Sample locations are depicted on Figure 5, and the PCB data is summarized on Table 1.

- Phase II Soil Sampling
    - Soil sampling of recent and historic scrap metal storage areas in the north and northwest portions of the NEMR Site was done on a 40 CFR 761 Subpart N three-meter grid in five sampling events as depicted on Figure 6. The center of this grid was established at the point where the PCB result of 64 mg/kg was reported during the initial boring program of 2006. The boundaries of the grid are based on (1) the NEMR Site boundaries, (2) former extent of scrap metal process and storage areas as indicated by residual metal and related waste debris in shallow soils, (3) knowledge of previous metal storage and process areas of the Site as determined by interviews with long-time employees, (4) observation of historic aerial photos, and (5) the lateral extent of PCB contamination as determined in the initial boring program of 2006. Limited data was collected along the southern boundary of the Site as this area has historically been paved to accommodate truck traffic entering from and exiting to Somerset Street, and initial soil boring data collected in 2006 was reported as non-detect or with PCBs < 1 mg/kg at asphalt-paved locations.
    - Two sampling events occurred in 2009 while the Site was in operation and three events occurred in 2011 and 2012 after the Site had been closed and cleared. In the five sampling events, there were 68 individual (i.e., single point) soil samples taken at grid nodes, 29 composite samples of two aliquots which accounted for 58 sampling nodes, and 2 composite samples of three aliquots which accounted for 6 sampling nodes. All soil samples were taken from the upper 3 inches of soil.
    - **At composite sampling locations, the reported laboratory concentration has been doubled for two-aliquot composites and tripled for three-aliquot composites to represent the highest possible concentration at any single sample node within a composite.** Several multi-node composite samples from the 2009 sampling events were subsequently replaced by the single-point sampling data of 2011 as indicated on Table 2. A simplified grid-based numbering scheme for sample locations has been established as depicted on Figure 7 for ease of reference to the data summary presented in Table 2.
        - **January 2009**. Twenty individual (i.e., single point) and composite soil samples were taken in open areas among the scrap piles in the northwestern portion of the yard in January 2009. Sample locations on the three-meter grid were taken from the upper 3 inches of soil where access was available with respect to scrap piles, plowed snow piles and the presence of shallow metal and waste debris that inhibited penetration to soil. The twenty samples were analyzed for PCBs, DRO, and the RCRA metals plus copper and zinc. Total PCBs ranged from 0.21 mg/kg to 7.6 mg/kg at an adjusted PQL that ranged from 0.019 to 0.110 mg/kg. The average PCB concentration of the twenty samples was 2.58 mg/kg.
        - **June 2009.** Thirty individual and composite soil samples were taken in open areas among the scrap piles in the northwestern portion of the yard in June 2009. Sample locations on the grid were taken from the upper 3 inches of soil. The thirty samples were analyzed for PCBs, DRO, and the RCRA metals plus copper, nickel and zinc. Total PCB concentrations ranged from non-detect (3 samples) to 270 mg/kg at an adjusted PQL that ranged from 0.018 to 2 mg/kg. Two soil samples located in the area of the former compactor exceeded 100 mg/kg. Both samples represented black-stained soil with adjusted PQLs of 1.0 mg/kg and 2.0 mg/kg, respectively. The remaining 28 soil samples had an adjusted PQL that ranged from 0.018 mg/kg to 0.400 mg/kg and had an average PCB concentration of the 2.37 mg/kg.
        - **March 2011**. Ten individual soil samples were taken in March 2011 on an extension of the three-meter sampling grid into the northeastern corner of the Site. The area had previously

been covered with scrap piles and stored jersey barriers and had been unavailable for sampling. The ten samples were taken from the upper 3 inches of soil and were analyzed for PCBs and the RCRA metals plus copper, nickel and zinc. Total PCB concentrations ranged from non-detect to 9.2 mg/kg at an adjusted PQL of 0.042 mg/kg. The average PCB concentration of the ten soil samples was 3.29 mg/kg.

- **December 2011**. Twenty-five individual soil samples were taken in December 2011 on grid nodes where (1) composite sampling had been done in the January and June 2009 sampling episodes and (2) where newly accessible sample locations were available due to the removal of scrap metal piles and jersey barriers. The twenty-five samples were taken from the upper 3 inches of soil and were analyzed for PCBs only. Total PCB concentrations ranged from 0.432 mg/kg to 4.42 mg/kg at an adjusted PQL that ranged from 0.016 to 0.035 mg/kg. The average PCB concentration of the twenty-five soil samples was 1.50 mg/kg. Of the 25 samples collected during this event, 20 of these samples were collected at node locations formerly sampled as part of a composite sample collected in 2009.
- **December 2012**. Twenty individual and composite soil samples were taken in December 2012 at interior grid nodes that represented data gaps in the Subpart N sampling grid. The twenty samples were taken from the upper 3 inches of soil and were analyzed for PCBs only. Total PCB concentrations ranged from < 0.018 mg/kg to 7.90 mg/kg at an adjusted PQL that ranged from 0.016 to 0.170 mg/kg. The average PCB concentration of the twenty-five soil samples was 1.46 mg/kg.

3.2.2 Concrete Pad Investigation

Summary: Nineteen samples were collected from 0-0.5 inches depth on the pad surface. Analytical results ranged from non-detect (< 0.018 mg/kg) to 0.970 mg/kg.

Detailed Description of Investigation:

- Concrete samples were obtained on September 6, 2008 at five locations on the concrete pad located on the eastern portion of the NEMR Site. The sample locations were selected on the basis of accessibility given the presence of stockpiled materials throughout the area at that time. The samples were obtained by collecting powder from multiple shallow drill holes (0-0.5 inch depth) within a one square-foot area on the pad. Total PCB concentrations ranged from 0.03 mg/kg to 0.97 mg/kg at an adjusted PQL of 0.018 mg/kg. The average PCB concentration of the five samples was 0.30 mg/kg. Sample locations are depicted on Figure 8, and the PCB data is summarized on Table 3.

- In order to supplement the concrete pad sampling of September 2008, concrete samples from fourteen additional locations on the concrete pad were obtained in January 2009 to obtain a representative distribution of sample locations across the pad. The samples were obtained by collecting powder from multiple shallow drill holes (0-0.5 inch depth) within a one square-foot area on the pad. Total PCBs ranged from non-detect to 0.51 mg/kg at an adjusted PQL that ranged from 0.018 mg/kg to 0.086 mg/kg (average adjusted PQL = 0.023 mg/kg). The average PCB concentration of the fourteen samples was 0.21 mg/kg. Sample locations are depicted on Figure 8, and the PCB data is summarized on Table 3.

- Although not all Subpart N characterization requirements have not been met for the concrete pad materials, no further characterization sampling is planned at this time. PCB characterization data has been reported consistently below 1 mg/kg at locations spatially distributed across the pad, and no hotspots have been identified. Further, the pad was installed in the 1980's, which is after the time when PCBs were prohibited from use in most manufactured materials.

3.2.3 Sub-Slab Soil Investigation

Summary: Thirteen samples were collected from 0-3 inches depth in soils beneath the concrete pad. Analytical results ranged from non-detect (< 0.088 mg/kg) to 2.6 mg/kg.

Detailed Description of Investigation:

- Utilizing push-technology, thirteen soil samples were obtained from beneath the concrete pad in order to determine the soil quality prior to the placement of the pad in the 1980s. The PCB concentrations in split spoon samples from the upper three inches of soil ranged from non-detect to 2.6 mg/kg at an adjusted PQL that ranged from of 0.018 mg/kg to 0.100 mg/kg. The average PCB concentration in the thirteen samples was 0.84 mg/kg, and four of the thirteen samples had total PCBs of greater than 1 mg/kg (maximum detected result of 2.6 mg/kg). Sample locations are depicted on Figure 9, and the PCB data is summarized on Table 4.

- Although not all Subpart N characterization requirements have not been met for the sub-slab soils, no further characterization sampling is planned at this time. PCB characterization data has been reported at levels up to 2.6 mg/kg at locations spatially distributed beneath the pad, and no hotspots have been identified.

4. PROPOSED REMEDIATION PLAN

As described in Section 2 of this plan, the Site is scheduled to be redeveloped for mixed-use purposes including an above-ground parking structure, a high-rise building for retail and residential use, and a landscaped open space. Based on these plans, the high-occupancy cleanup level for bulk PCB remediation waste applies to the Site as described in 40 CFR 761.61(a)(4)(i)(A). A target cleanup level of 10 mg/kg has been established for the PCB remediation activities presented herein. PCB remediation waste remaining at the Site at concentrations > 1 mg/kg and ≤ 10 mg/kg shall be covered with a cap meeting the requirements of 40 CFR 761.61(a)(7) and (a)(8).

4.1 PCB-IMPACTED CONCRETE AND SUB-SLAB SOILS

4.1.1 Concrete Pad

The approximately 6,000 sq. ft. concrete pad located on the eastern portion of the Site will be broken up as part of the Site remediation activities. Nineteen samples have been taken from the upper half-inch of the concrete pad. PCB concentrations in the samples have ranged from non-detect to 0.970 mg/kg. The average PCB content of nineteen samples is 0.25 mg/kg. Due to the large volume of the concrete pad (approx. 1,500 tons) and PCB characterization data reported consistently below 1 mg/kg at locations evenly distributed across the pad, the concrete will be broken up and left in place as structural fill material. The crushed concrete will remain beneath the soil cap described in Section 4.5.

4.1.2 Sub-Slab Soils

Thirteen samples of soil were taken from the upper three-inches of soil beneath the concrete pad by means of split spoon samples. The three-inch sample provided a sufficient sample volume for laboratory testing. Sub-slab soils had PCB concentrations ranging from non-detect (< 0.09 mg/kg) to 2.6 mg/kg. The average concentration of the thirteen samples was 0.84 mg/kg. Given that all data points have been reported well below the 10 mg/kg cleanup level at locations evenly distributed beneath the pad, the soils beneath the concrete pad will be capped in place. The engineered structural caps for PCB-containing soils will be discussed further in Section 4.5.

4.2 PCB-IMPACTED SOILS

The soil data depicted in Figure 7 represents 132 nodes on the three-meter grid which covers the former operational area of the NEMR Site, as determined by (1) the presence of metal debris in shallow soil, (2) interviews with long-time employees, (3) historical aerial photographs, and (4) initial site-wide soil sampling results. The node values for single-point and composite samples range from non-detect (< 0.02 mg/kg) to 270 mg/kg.

PCB-impacted soil at levels exceeding the 10 mg/kg target cleanup level will be excavated from five areas of the grid as shown on Figure 10. The extent of each soil excavation is to be based on the sampling grid data and will extend horizontally to the full distance of the nearest adjacent nodes with levels less than 10 mg/kg. A summary of the data driving the excavation at each area is as follows:

- Excavation Area #1 (located at Boring B-2, PCBs at 10.1 mg/kg)
- Excavation Area #2 (located at Boring B-5, PCBs at 64 mg/kg)
- Excavation Area #3 (located at sample location L-5, PCBs at 16.1 mg/kg)
- Excavation Area #4 (located at sample location R-10, PCBs at 270 mg/kg; and, composite sample location S-10/S-11, PCBs at 105 mg/kg)
- Excavation Area #5 (located at sample location Y-14, PCBs at 9.2 mg/kg).

Prior to excavation, the areas to be excavated will be marked and staked in accordance with the existing three-meter grid layout. Soil excavation will initially extend to a minimum depth of 12 inches at each of the five areas. In areas where dark-stained, odorous or debris-laden soils are present at depths greater than 12 inches, soils will be excavated to depths greater than 12 inches, as governed by soil appearance and characteristics.

The vertical extent of excavation in each area will be confirmed by verification sampling on a Subpart O grid. Further lateral delineation and/or sidewall sampling will also be performed at select areas as described in Section 4.3 below.

4.3 VERIFICATION SAMPLING

Post-remediation soil sampling will be performed in accordance with Subpart O of 40 CFR 761.61(a)(6) to confirm that all soils containing PCBs greater than 10 mg/kg target cleanup level have been removed. Subpart O verification sampling will be performed at the base of each of the five excavation areas. Samples will be collected to a depth of three inches below the surface of the base of excavation.

Additional lateral extent or sidewall verification samples are also proposed in addition to base of excavation sampling for the following excavation areas:

- Excavation Area #1: surface soil samples (0-3 inches bgs) will be collected on a Subpart O grid along the western extent of this area to confirm the adequacy of the lateral extent of excavation.
- Excavation Area #2: no additional lateral extent or sidewall verification samples are warranted; lateral delineation on existing grid is sufficient.
- Excavation Areas #3, #4, and #5: soil characterization data has not been collected beyond the existing fence line at these locations along the northwestern boundary of the Site (i.e., beneath the Bayside Trail property). The Bayside Trail property was recently redeveloped as part of the Portland Brownfields Revitalization Project. Fill materials were imported to the Bayside Trail property to raise the overall site grade prior to installing a paved recreation path over the native materials. As such, excavation areas on the NEMR Site that abut the Bayside Trail property to the northwest will be subject to sidewall sampling within the horizons of native materials beneath the newly imported fill material (i.e., at or below the existing grade of NEMR Site soils) to confirm that target cleanup levels have been met at the lateral extent of these excavations.

If sampling results indicate that PCBs > 10 mg/kg remain either at the base of an excavation or at a greater lateral extent of an excavation, then additional soil will be removed at these locations. Subsequent verification samples will be collected at off-set locations in accordance with 40 CFR 761.283(b)(1)(ii). Excavation and verification sampling will continue in this manner until the 10 mg/kg target cleanup level is met at all sample locations.

Verification samples will be submitted to Katahdin Analytical Services of Scarborough, Maine for Soxhlet extraction by EPA Method 3540C and PCB analysis by EPA Method 8082.

4.4 MANAGEMENT OF PCB IMPACTED SOIL WASTES

The general sequence of Site remediation activities will be as follows:

- **Concrete Pad Demolition** Contractors will break up the concrete pad to a size suitable for subgrade fill.
- **Remediation of Soils in the Former Operational Areas of the Site**. Soils within the grid areas that exceed 10 mg/kg will be excavated, stored, and transported for disposal to an appropriate off-site facility. The factors that will guide the selection of the disposal facility include (1) the level of PCBs in soil, (2) the levels of other scrap yard and rail yard contaminants in soil and (3) the hazardous waste characteristics of the soils as determined by Toxic Characteristic Leaching Procedure (TCLP) testing of excavated waste

soils. The five areas in which soils will be excavated to a minimum depth of 12 inches depth are highlighted in yellow on Figure 10. Soils with PCBs ≤ 10 mg/kg will be left in place beneath a cap meeting the requirements of 40 CFR 761.61(a)(7) as described in Section 4.5 below.

During excavation work, the main dust control mechanism to be employed on the project will be the use of engineering controls (e.g. wetting the soils with a hose or hand sprayer) and personal protective equipment (PPE). If visible dust is observed, then a temporary work stoppage will be initiated in order to employ additional dust suppression techniques until visible dust has been eliminated.

- **Arsenic and Lead in Onsite Soil**. The presence of arsenic and lead in onsite soils may influence the selection of a disposal facility for PCB-containing soil. Arsenic and lead levels in NEMR soils are similar to the levels in the rail yard soils that abut the Site, and are considered to be derived from former rail yard operations on the NEMR Site. Sixty soil samples from the NEMR site were analyzed for arsenic and all samples exceeded the Maine DEP soil guidelines for arsenic in residential settings of 1.4 mg/kg. Arsenic levels on the Site range from 13 mg/kg to 151 mg/kg. Forty-one of sixty soil samples from the NEMR site exceeded the Maine DEP Maine soil guidelines for lead in residential settings of 341 mg/kg. Lead levels on the site range from 32 mg/kg to 5,500 mg/kg.

- **Disposal Options for PCB Wastes**. Excavated soil will be placed in 25-yard roll-off containers and covered with a poly barrier until post-excavation verification sampling and analyses are completed. The PCB wastes will be stored in accordance with 40 CFR 761.65, and containers will be properly labeled and marked in accordance with 40 CFR 761.40. Upon confirmation of cleanup by verification sampling, the waste soils will be transported to one of two disposal facilities, depending on the chemical characteristics of the PCB waste soils with their ancillary scrap yard contaminants. At this time it is anticipated that soils from Excavation Areas #1, #3, and #5 will be transported to a facility permitted to accept TSCA waste and PCB remediation waste < 50 mg/kg based on the as-found concentrations of PCBs in these three areas ranging between 10 and 20 mg/kg (e.g., the WM Turnkey landfill in Rochester, NH, or equivalent). It is anticipated that soils from Excavation Areas #2 and #4 will be transported to a facility permitted to accept TSCA waste and PCB remediation waste ≥ 50 mg/kg, based on the as-found concentrations of PCBs in these three areas ≥ 50 mg/kg (e.g., the CWM Chemical Services LLC facility in Model City, NY, or equivalent). Copies of manifests, waste shipment records, and certificates of disposal will be collected and provided as part of the final report to EPA.

- **Decontamination**. Equipment used for the excavation of PCB-impacted soils will be decontaminated in accordance with 40 CFR 761.79 at the completion of work. Specific decontamination procedures will be identified in a workplan to be prepared by the selected remediation contractor.

4.5 DESCRIPTION OF THE SOIL CAP

After remediation and management of PCB-impacted soils and concrete as described in Sections 4.1 through 4.4 of this plan, a cap meeting the requirements of 40 CFR 761.61(a)(7) will be installed over remaining Site soils containing PCBs ≤ 10 mg/kg. The cap will consist of a compacted soil layer having a minimum thickness of 25 centimeters (10 inches) and meeting the permeability, sieve, liquid limit, and plasticity index parameters in 761.75(b)(1)(ii) through (b)(1)(v). This cap will be installed over the entirety of the 0.85-acre footprint of the NEMR Site.

After cap installation, a visual barrier will be installed to demarcate the upper limits of the compacted soil cap layer. The visual barrier will consist of a colored porous geofabric or geotextile material inert to biological degradation, such as a Mirafi® 140NL/O orange nonwoven geotextile material, or equivalent.

The current ground surface elevation of the Site ranges from approximately 7.5 to 8.5 feet above mean sea level (amsl). The soils at the NEMR Site consist of approximately 12 feet of clay, silt and sand fill materials overlying approximately 20 feet of native marine clay. Bedrock is at a depth of 30 to 35 feet.

After installation of the soil cap and visual barrier, an additional quantity of imported fill material will be required in order to adapt to flood protection measures and meet minimum requirements of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) base flood elevation of 10 feet amsl for the local area, plus an additional 2 feet of elevation to meet insurance and zoning requirements for a final minimum Site elevation of 12 feet amsl. Given the current Site elevation of 7.5 to 8.5 feet amsl, it is estimated that approximately 4 feet of fill material will be imported to the Site to raise the overall Site grade to a minimum elevation of 12 feet amsl.

A cross-section of the final proposed soil layers is depicted in Figure 11.

4.6 UTILITY CORRIDOR AND FOUNDATION PILE INSTALLATIONS

After achieving a minimum Site elevation of 12 feet amsl as described in Section 4.5, the proposed parking structure and residential structure to be constructed in the footprint of the Site will be supported by pile-driven deep foundations. The depth of these piles will extend through and beyond the depth of the capped soils. In addition, subsurface utilities to be installed at the Site may also extend to the depth of the capped soils. The location of the foundation piles and utilities to be installed at the Site are unknown as of the date of this plan; however, the following measures will be undertaken to properly manage soils that will be disturbed beneath the cap during these activities:

- Upon finalizing plans that determine where utility corridors or foundation piles will be installed to depths that will disturb soils beneath the newly installed cap, these locations will be marked out in the field.
- At marked locations, a Geoprobe rig will be used to characterize soils for PCBs to the full depth of the anticipated disturbance into native soils (e.g., a utility trench to be advanced to a depth of 6 feet below ground surface will encounter approximately 4 feet of newly imported fill materials, 1 foot of the soil cap, and 1 foot of native materials; the Geoprobe boring would be advanced to the 5-6 foot interval to characterize only the native materials for PCBs prior to digging the trench).
- Borings will installed at a frequency of one boring per 50 linear feet of utility trench, and at 20% of foundation piles. Soil analytical data will be compared to the 10 mg/kg target cleanup level for Site soils; any soils containing PCBs > 10 mg/kg will be managed for off-site disposal, and any soils containing PCBs ≤ 10 mg/kg will be backfilled at its point of generation. Any excess soil volume that cannot be backfilled to the point of generation will be managed for off-site disposal at as-found concentrations.
- Locations requiring removal of the cap and visual barrier will be subject to in-kind replacements where feasible. A minimum 12-inch layer of compacted fill and visual barrier as specified in Section 4.5 will be installed at horizons matching the adjacent ground surface to maintain a continuous cap surface upon backfilling the utility trenches. This will not be feasible at foundation pile installations, as the disturbed space will be occupied by the foundation pile.

4.7 DEED RESTRICTION

A deed notice and restrictions for the capped soils containing PCBs ≤ 10 mg/kg PCBs at the Site will be filed at the Cumberland County Registry of Deeds within 60 days of completion of the cleanup activity. The owner will submit a signed certification that the deed notice requirements of Section 761.61(a)(8) have been fulfilled.

5. REPORTING AND DOCUMENTATION

A certification signed by the City of Portland in accordance with 40 CFR 761.61(a)(3)(i)(E) is provided in Appendix E of this plan.

Following completion of the project, the methods and results of the remediation, disposal and verification project will be documented and the report will be submitted to EPA and the Maine DEP VRAP program. The report will include all records and documents required by 40 CFR Part 761, including but not limited to the records required under Subparts J and K. At a minimum, this Report will include:

- A discussion of the project activities, including any modifications that were made to the cleanup plan;
- Characterization and post-abatement sampling analytical results, with copies of the accompanying analytical chains of custody;
- Field and laboratory quality control/quality assurance checks;
- An estimate of the quantity of PCBs removed and disposed off-site;
- Copies of manifests and/or bills of lading; and,
- Copies of certificates of disposal or similar certifications issued by the disposer, as applicable.

Table 1
Soil Boring Analytical Data Summary
Initial Geoprobe Boring Investigation
Former New England Metals Recycling Site - Portland, Maine

Media	Sample ID	Sample Interval	Total PCBs
February 2006			
Soil	B-1-1	0-1 ft	< 0.018
Soil	B-2-1	0-1 ft	**10.1**
Soil	B-3-1A	0-1.5 ft	< 0.019
Soil	B-3-1B	1.5-3.5 ft	< 0.019
Soil	B-4-1	0-2.5 ft	< 0.019
Soil	B-5-1	0-1 ft	**64**
Soil	B-7-1	0-1 ft	< 0.019
Soil	B-8-1	0-1 ft	0.90
Soil	B-9-1	0-1 ft	< 0.019
Soil	B-10-1	0-1 ft	1.44
Soil	B-11-1	0-1 ft	< 0.020

Notes:

1. Samples collected by Tewhey Associates of Gorham, Maine.
2. Samples submitted to Katahdin Analytical Services of Scarborough, Maine.
3. Samples extracted by EPA Method 3550 and analyzed by EPA Method 8082.
4. Sample concentrations are expressed in milligrams per kilogram (mg/kg).

Table 2
Surface Soil Analytical Data Summary - Phase II Investigations
Former New England Metals Recycling Site - Portland, Maine

January 2009						
Media	**Original Sample ID**	**Sample Type**	**Number of Nodes in Sample**	**Total PCBs Reported by Lab[1]**	**Figure 7 Sample ID**	**Figure 7 Total PCB Result[1]**
Soil	2-3E	Composite	3	1.26	B7/B8/B9	3.8
Soil	3B	Discrete	1	2.36	C-3	2.4
Soil	4-2E	Composite	2	1.37	D5/D6	2.7
Soil	45-2E	Composite	2	0.56	D7/E7	1.1
Soil	5D	Discrete	1	7.6	E-6	7.6
Soil	6A	Discrete	1	0.21	F-7	0.2
Soil	567-3E	Composite	3	0.26	E8/F8/G8	0.8
Soil	89-2E	Composite	2	0.98	H8/I8	2.0
Soil	10B	Discrete	1	1.44	J-7	1.4
Soil	12-2W	Composite	2	1.67	L7/L8	3.3
Soil	13-2W	Composite	2	0.90	M8/M9	1.8
Soil	13-2E	Composite	2	3.37	M10/M11	6.7
Soil	14-2E	Composite	2	2.20	N10/N11	4.4
Soil	15-2E	Composite	2	1.74	O10/O11	3.5
Soil	16-2E	Composite	2	1.78	P11/P12	3.6
Soil	1-6	Composite	2	2.1	--	--
Soil	2-2W	Composite	2	4.96	--	--
Soil	910-2E	Composite	2	3.43	--	--
Soil	91011-4E	Composite	3	2.32	--	--
Soil	12-3E	Composite	2	5.5	--	--

Notes:

1. "Total PCBs Reported by Lab" represents laboratory-reported analytical values for a sample, regardless of whether the sample was a discrete or composite sample; "Figure 7 PCB Result" represents the value presented on Figure 7 due to multiplying the laboratory-reported concentrations for composite sample by the number of aliquots in the sample.
2. Gray-shaded data represent composite samples that have been superseded by single-point samples.
3. Samples collected from 0-3 inches below ground surface by Tewhey Associates of Gorham, Maine.
4. Samples submitted to Katahdin Analytical Services of Scarborough, Maine.
5. Samples extracted by EPA Method 3550 and analyzed by EPA Method 8082.
6. Sample concentrations are expressed in milligrams per kilogram (mg/kg).

Table 2
Surface Soil Analytical Data Summary - Phase II Investigations
Former New England Metals Recycling Site - Portland, Maine

June 2009						
Media	**Original Sample ID**	**Sample Type**	**Number of Nodes in Sample**	**Total PCBs Reported by Lab[1]**	**Figure 7 Sample ID**	**Figure 7 Total PCB Result[1]**
Soil	1A	Discrete	1	0.16	A-2	0.2
Soil	2A	Discrete	1	0.36	B-2	0.4
Soil	34-2W	Composite	2	0.52	C2/D2	1.0
Soil	56-2W	Composite	2	0.73	E2/F2	1.5
Soil	5A	Discrete	1	<0.02	E-1	ND
Soil	7A	Discrete	1	<0.02	G-2	ND
Soil	5C	Discrete	1	3.2	E-4	3.2
Soil	3B	Discrete	1	1.7	C-4	1.7
Soil	3-2	Composite	2	1.83	C5/C6	3.7
Soil	2-2E	Composite	2	1.18	B5/B6	2.4
Soil	17-2	Composite	2	3.4	Q9/Q10	6.8
Soil	16A	Discrete	1	0.67	P-8	0.7
Soil	16-2W	Composite	2	2.9	P9/P10	5.8
Soil	18A	Discrete	1	**270**	R-10	**270**
Soil	14-2W	Composite	2	1.72	N6/N7	3.4
Soil	11A	Discrete	1	3.3	K-5	3.3
Soil	12A	Discrete	1	**16.1**	L-5	**16.1**
Soil	13A	Discrete	1	2.15	M-6	2.2
Soil	8A	Discrete	1	1.38	H-3	1.4
Soil	9A	Discrete	1	<0.21	I-3	ND
Soil	10A	Discrete	1	6.9	J-4	6.9
Soil	15A	Discrete	1	1.24	O-7	1.2
Soil	15-2W	Composite	2	3.5	O8/O9	7.0
Soil	21A	Discrete	1	2.1	U-12	2.1
Soil	20-2	Composite	2	1.66	T11/T12	3.3
Soil	19-2	Composite	2	**105**	S10/S11	**210**
Soil	8B	Discrete	1	1.65	H-5	1.7
Soil	7B	Discrete	1	3.0	G-6	3.0
Soil	4-2W	Composite	2	3.3	--	--

Notes:

1. "Total PCBs Reported by Lab" represents laboratory-reported analytical values for a sample, regardless of whether the sample was a discrete or composite sample; "Figure 7 PCB Result" represents the value presented on Figure 7 due to multiplying the laboratory-reported concentrations for composite sample by the number of aliquots in the sample.
2. Gray-shaded data represent composite samples that have been superseded by single-point samples.
3. Samples collected from 0-3 inches below ground surface by Tewhey Associates of Gorham, Maine.
4. Samples submitted to Katahdin Analytical Services of Scarborough, Maine.
5. Samples extracted by EPA Method 3550 and analyzed by EPA Method 8082.
6. Sample concentrations are expressed in milligrams per kilogram (mg/kg).

Table 2
Surface Soil Analytical Data Summary - Phase II Investigations
Former New England Metals Recycling Site - Portland, Maine

March 2011						
Media	**Original Sample ID**	**Sample Type**	**Number of Nodes in Sample**	**Total PCBs Reported by Lab[1]**	**Figure 7 Sample ID**	**Figure 7 Total PCB Result[1]**
Soil	M-1	Discrete	1	0.54	AA-16	0.5
Soil	M-2	Discrete	1	7.6	Z-15	7.6
Soil	M-3	Discrete	1	9.2	Y-14	9.2
Soil	M-4	Discrete	1	3.28	X-14	3.3
Soil	M-5	Discrete	1	1.32	W-13	1.3
Soil	M-6	Discrete	1	2.30	AA-17	2.3
Soil	M-7	Discrete	1	4.21	Z-16	4.2
Soil	M-8	Discrete	1	1.48	Y-15	1.5
Soil	M-9	Discrete	1	< 0.02	X-15	ND
Soil	M-10	Discrete	1	3.00	W-14	3.0

Notes:

1. "Total PCBs Reported by Lab" represents laboratory-reported analytical values for a sample, regardless of whether the sample was a discrete or composite sample; "Figure 7 PCB Result" represents the value presented on Figure 7 due to multiplying the laboratory-reported concentrations for composite sample by the number of aliquots in the sample.
2. Samples collected from 0-3 inches below ground surface by Tewhey Associates of Gorham, Maine.
3. Samples submitted to Katahdin Analytical Services of Scarborough, Maine.
4. Samples extracted by EPA Method 3550 and analyzed by EPA Method 8082.
5. Sample concentrations are expressed in milligrams per kilogram (mg/kg).

Table 2
Surface Soil Analytical Data Summary - Phase II Investigations
Former New England Metals Recycling Site - Portland, Maine

December 2011						
Media	**Original Sample ID**	**Sample Type**	**Number of Nodes in Sample**	**Total PCBs Reported by Lab[1]**	**Figure 7 Sample ID**	**Figure 7 Total PCB Result[1]**
Soil	A-1	Discrete	1	1.74	A-3	1.7
Soil	A-2	Discrete	1	1.71	A-4	1.7
Soil	A-3	Discrete	1	1.65	A-5	1.7
Soil	A-4	Discrete	1	3.29	A-6	3.3
Soil	A-5	Discrete	1	1.26	A-7	1.3
Soil	A-6	Discrete	1	1.21	A-8	1.2
Soil	A-7	Discrete	1	4.42	A-9	4.4
Soil	B-1	Discrete	1	0.96	B-3	1.0
Soil	B-2	Discrete	1	1.45	B-4	1.5
Soil	C-1	Discrete	1	0.77	D-3	0.8
Soil	C-2	Discrete	1	1.03	D-4	1.0
Soil	D-1	Discrete	1	0.43	I-9	0.4
Soil	D-2	Discrete	1	1.65	J-9	1.7
Soil	E-1	Discrete	1	0.64	I-10	0.6
Soil	E-2	Discrete	1	0.45	J-10	0.5
Soil	E-3	Discrete	1	1.37	K-10	1.4
Soil	E-4	Discrete	1	0.94	K-9	0.9
Soil	F-1	Discrete	1	1.13	L-9	1.1
Soil	F-2	Discrete	1	0.56	L-10	0.6
Soil	F-3	Discrete	1	0.74	L-11	0.7
Soil	H-1	Discrete	1	0.50	E-5	0.5
Soil	I-1	Discrete	1	2.91	F-6	2.9
Soil	J-1	Discrete	1	2.16	G-7	2.2
Soil	K-1	Discrete	1	1.03	H-7	1.0
Soil	L-1	Discrete	1	3.54	I-7	3.5

Notes:

1. "Total PCBs Reported by Lab" represents laboratory-reported analytical values for a sample, regardless of whether the sample was a discrete or composite sample; "Figure 7 PCB Result" represents the value presented on Figure 7 due to multiplying the laboratory-reported concentrations for composite sample by the number of aliquots in the sample.
2. Samples collected from 0-3 inches below ground surface by Tewhey Associates of Gorham, Maine.
3. Samples submitted to Katahdin Analytical Services of Scarborough, Maine.
4. Samples extracted by EPA Method 3550 and analyzed by EPA Method 8082.
5. Sample concentrations are expressed in milligrams per kilogram (mg/kg).

Table 2
Surface Soil Analytical Data Summary - Phase II Investigations
Former New England Metals Recycling Site - Portland, Maine

December 2012						
Media	**Original Sample ID**	**Sample Type**	**Number of Nodes in Sample**	**Total PCBs Reported by Lab[1]**	**Figure 7 Sample ID**	**Figure 7 Total PCB Result[1]**
Soil	F4/F5	Composite	2	0.40	F4/F5	0.8
Soil	F3/G3	Composite	2	0.87	F3/G3	1.7
Soil	G4/G5	Composite	2	<0.019	G4/G5	ND
Soil	H4/I4	Composite	2	1.64	H4/I4	3.3
Soil	H6/I6	Composite	2	0.62	H6/I6	1.2
Soil	I5/J5	Composite	2	0.51	I5/J5	1.0
Soil	J6/K6	Composite	2	0.44	J6/K6	0.9
Soil	L6	Discrete	1	0.61	L6	0.6
Soil	K7	Discrete	1	0.70	K7	0.7
Soil	J8/K8	Composite	2	0.41	J8/K8	0.8
Soil	M7	Discrete	1	0.41	M7	0.4
Soil	N8/N9	Composite	2	0.59	N8/N9	1.2
Soil	M12	Discrete	1	1.81	M12	1.8
Soil	N12/O12	Composite	2	<0.018	N12/O12	ND
Soil	Q12	Discrete	1	0.27	Q12	0.3
Soil	R12	Discrete	1	2.18	R12	2.2
Soil	Q11	Discrete	1	7.9	Q11	7.9
Soil	R11	Discrete	1	6.8	R11	6.8
Soil	V12	Discrete	1	1.47	V12	1.5
Soil	V13	Discrete	1	1.64	V13	1.6

Notes:

1. "Total PCBs Reported by Lab" represents laboratory-reported analytical values for a sample, regardless of whether the sample was a discrete or composite sample; "Figure 7 PCB Result" represents the value presented on Figure 7 due to multiplying the laboratory-reported concentrations for composite sample by the number of aliquots in the sample.
2. Samples collected from 0-3 inches below ground surface by Tewhey Associates of Gorham, Maine.
3. Samples submitted to Katahdin Analytical Services of Scarborough, Maine.
4. Samples extracted by EPA Method 3550 and analyzed by EPA Method 8082.
5. Sample concentrations are expressed in milligrams per kilogram (mg/kg).

Table 3
Concrete Analytical Data Summary
Initial Concrete Pad Investigation
Former New England Metals Recycling Site - Portland, Maine

Media	Sample ID	Total PCBs
September 2008		
Concrete	C-1	0.026
Concrete	C-2	0.026
Concrete	C-3	0.970
Concrete	C-4	0.126
Concrete	C-5	0.330
January 2009		
Concrete	CP-1	0.140
Concrete	CP-2	0.510
Concrete	CP-3	0.290
Concrete	CP-4	< 0.086
Concrete	CP-5	0.098
Concrete	CP-6	0.061
Concrete	CP-7	0.138
Concrete	CP-9	0.159
Concrete	CP-10	< 0.018
Concrete	CP-11	0.260
Concrete	CP-13	0.510
Concrete	CP-14	0.083
Concrete	CP-15	0.120
Concrete	CP-16	0.110

Notes:

1. Samples collected by Tewhey Associates of Gorham, Maine.
2. Samples submitted to Katahdin Analytical Services of Scarborough, Maine.
3. Samples extracted by EPA Method 3550 and analyzed by EPA Method 8082.
4. Sample concentrations are expressed in milligrams per kilogram (mg/kg).

Table 4
Sub-Slab Soil Analytical Data Summary
Initial Investigation Beneath Concrete Pad
Former New England Metals Recycling Site - Portland, Maine

Media	Sample ID	Total PCBs
January 2009		
Soil	CS-1	1.14
Soil	CS-4	0.29
Soil	CS-6	0.64
Soil	CS-7	1.97
Soil	CS-8	1.84
Soil	CS-9	2.60
Soil	CS-10	0.34
Soil	CS-11	0.174
Soil	CS-12	<0.088
Soil	CS-14	0.90
Soil	CS-15	0.81
Soil	CS-16	0.053
Soil	CS-17	<0.093

Notes:

1. Samples collected by Tewhey Associates of Gorham, Maine.
2. Samples submitted to Katahdin Analytical Services of Scarborough, Maine.
3. Samples extracted by EPA Method 3550 and analyzed by EPA Method 8082.
4. Sample concentrations are expressed in milligrams per kilogram (mg/kg).

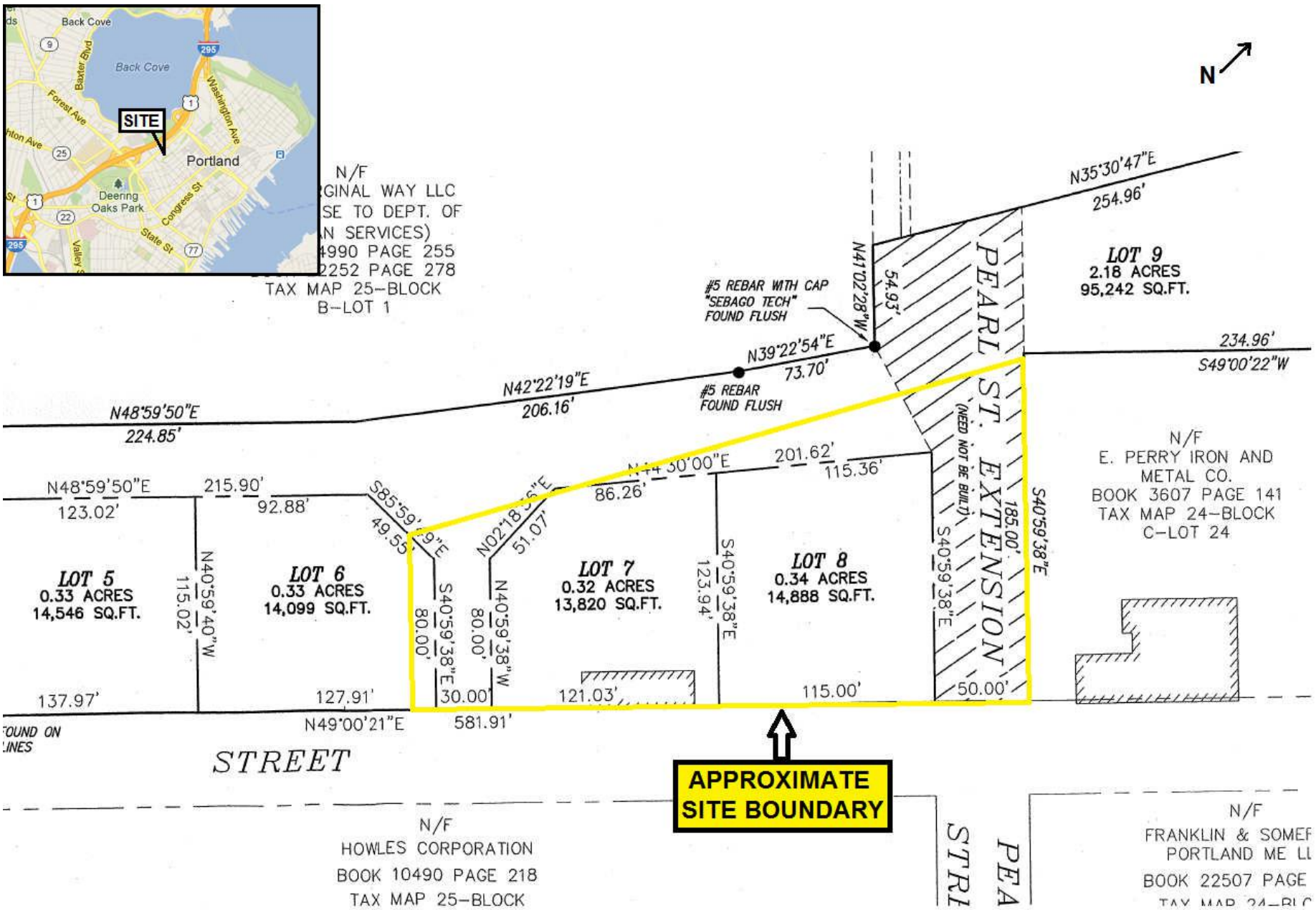


FIGURE 1 - SITE LOCUS MAP

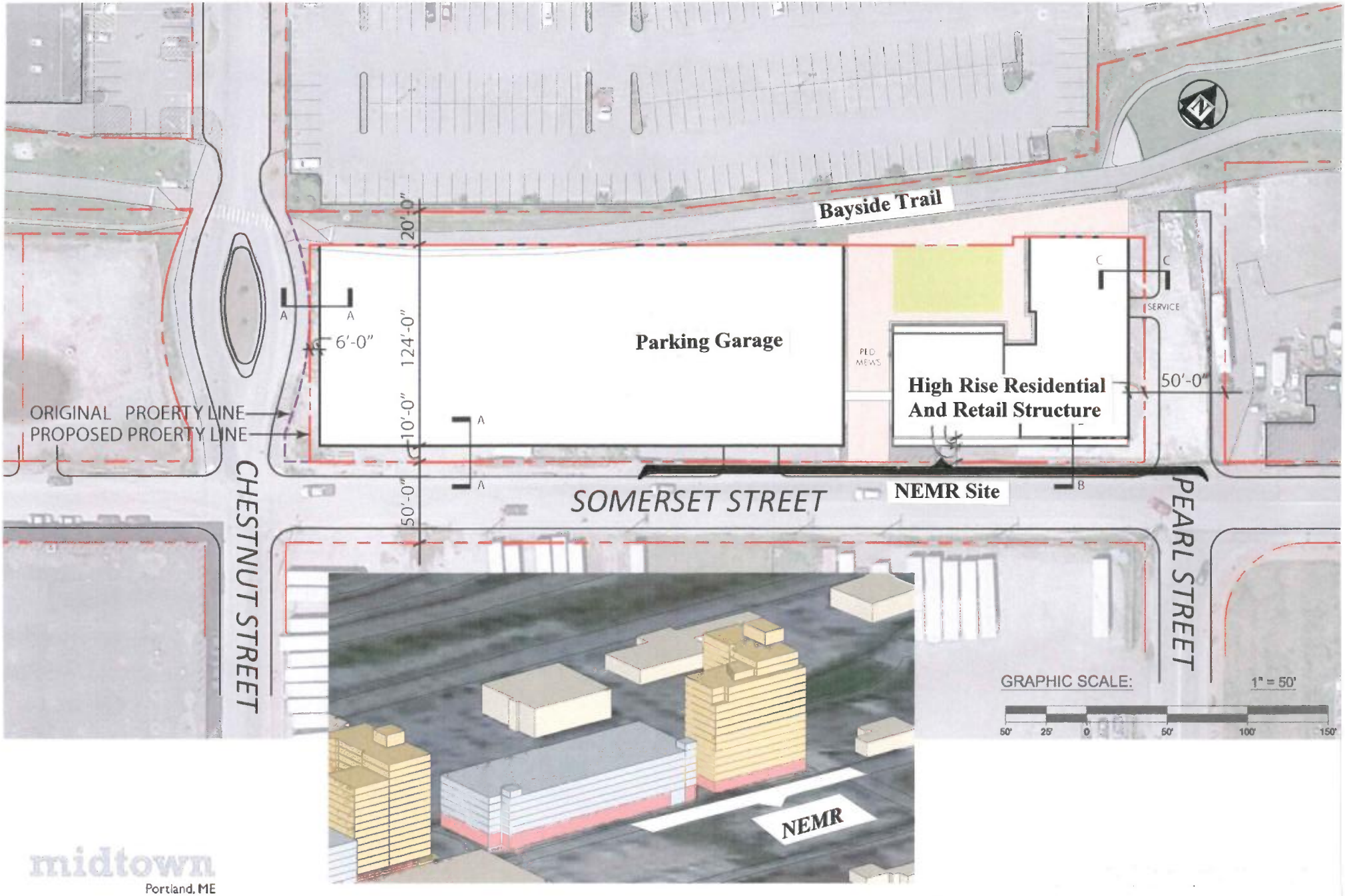


Figure 2 Proposed Development for the NEMR Site and Adjacent Parcels

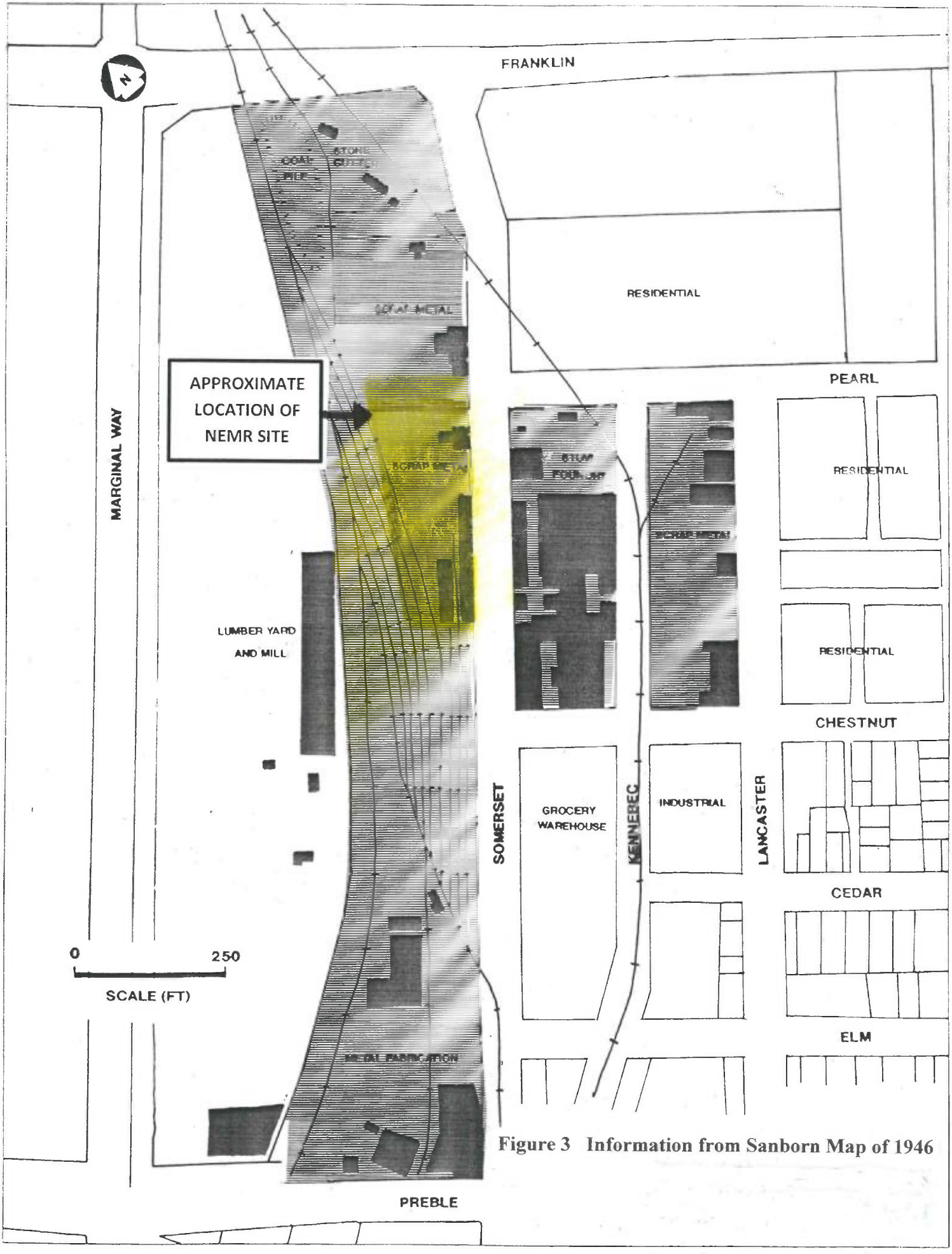


Figure 3 Information from Sanborn Map of 1946

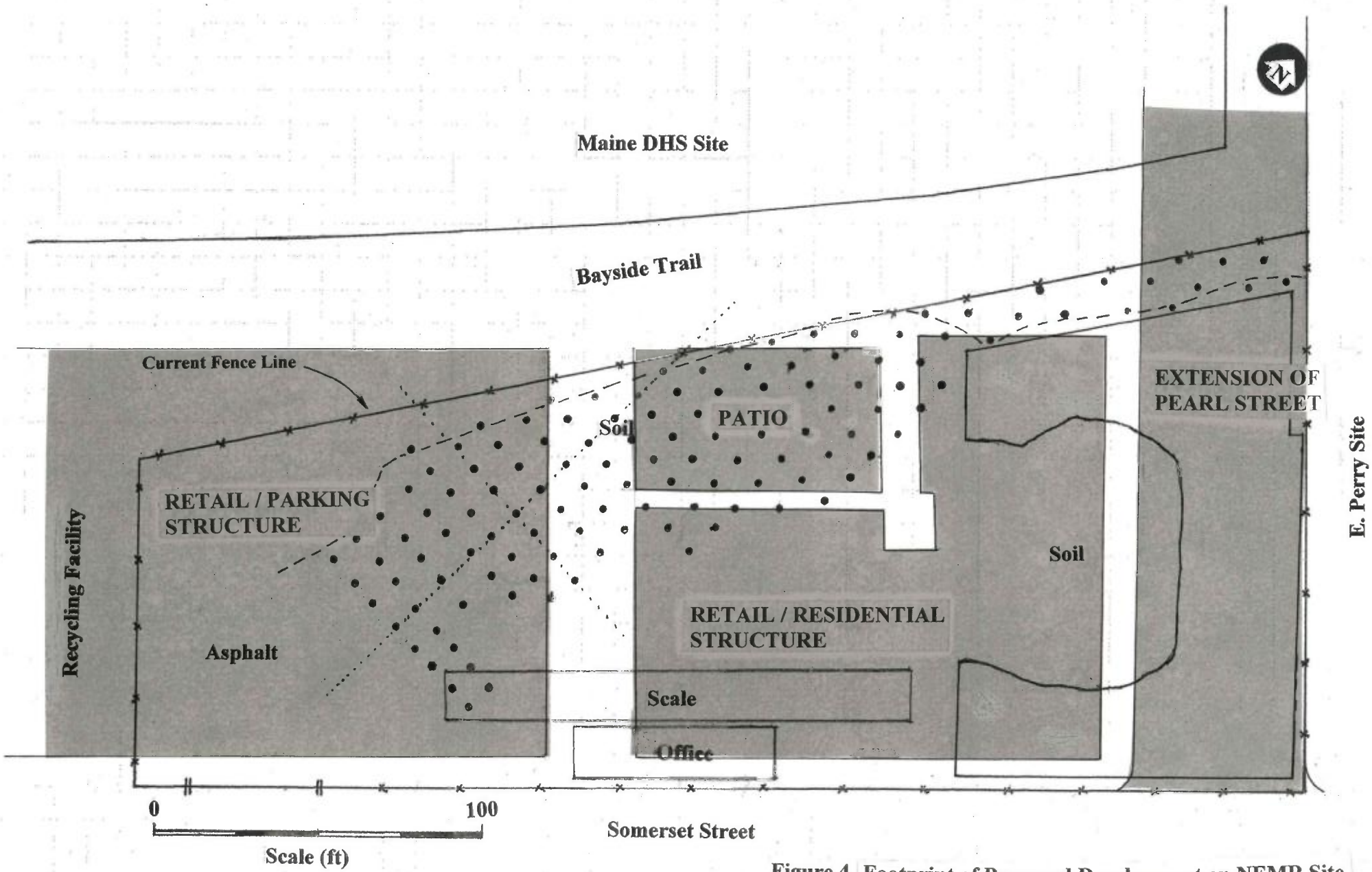


Figure 4 Footprint of Proposed Development on NEMR Site

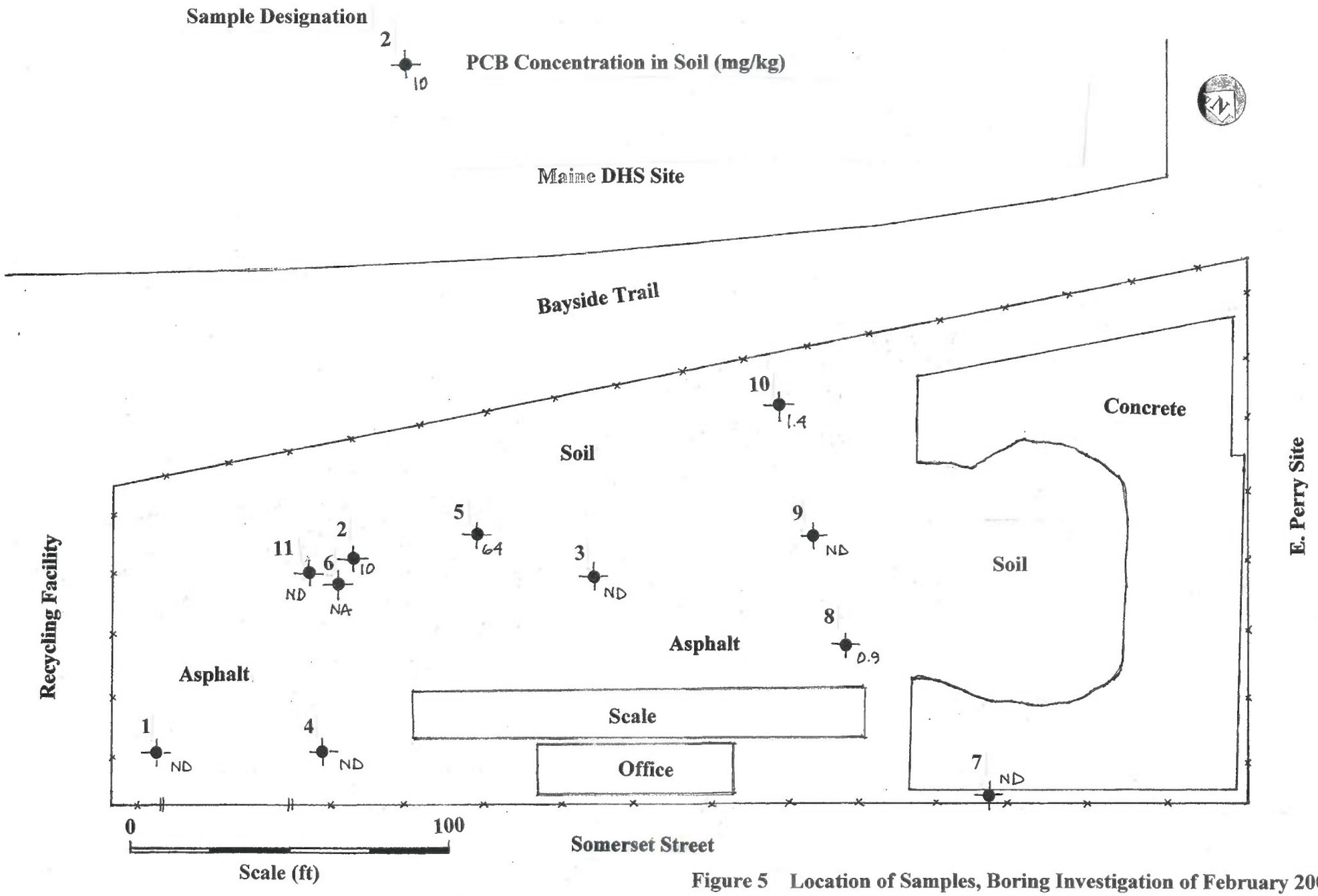


Figure 5 Location of Samples, Boring Investigation of February 2006

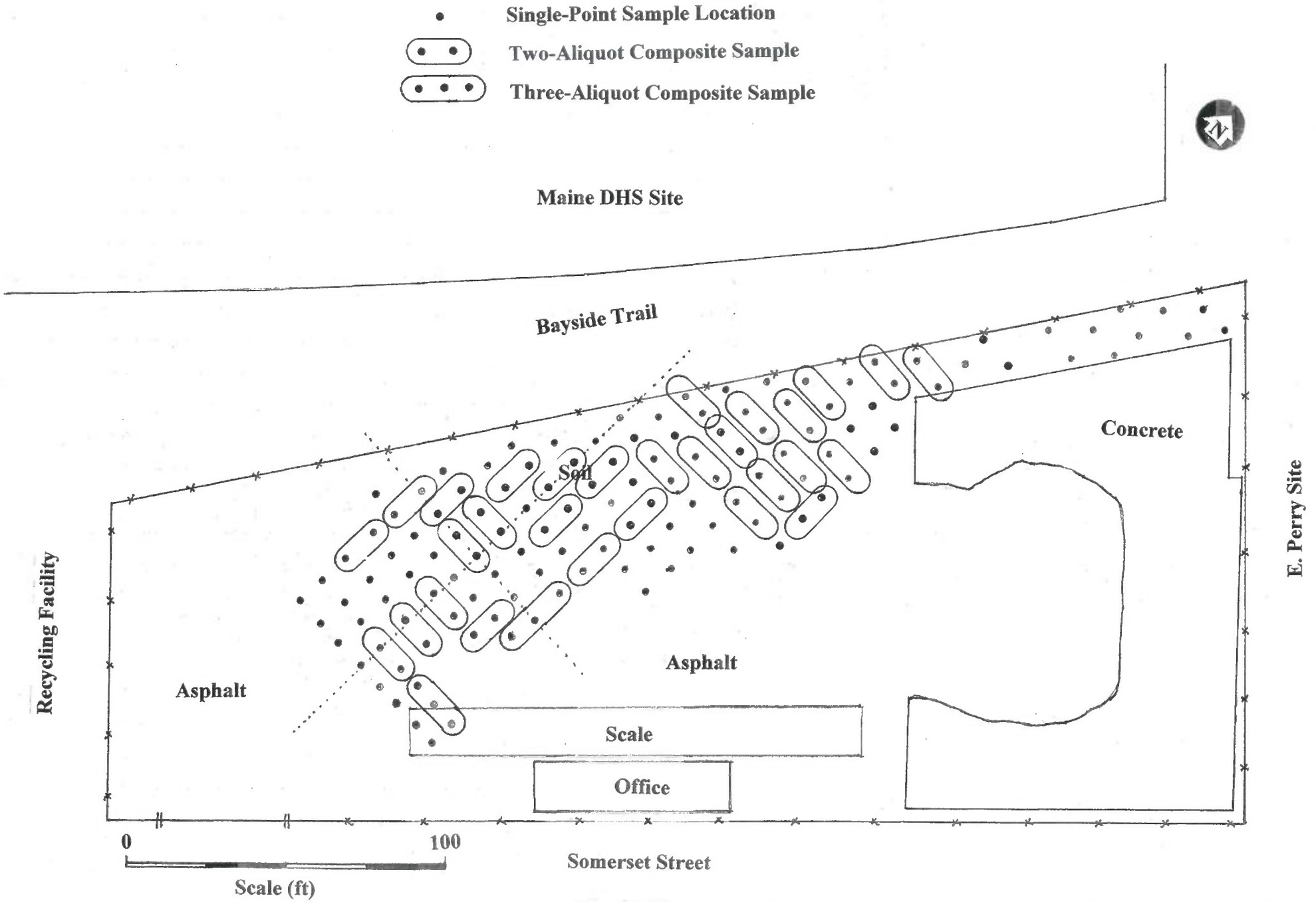


Figure 6 Location of Single-Point and Composite Samples on Three-Meter Grid

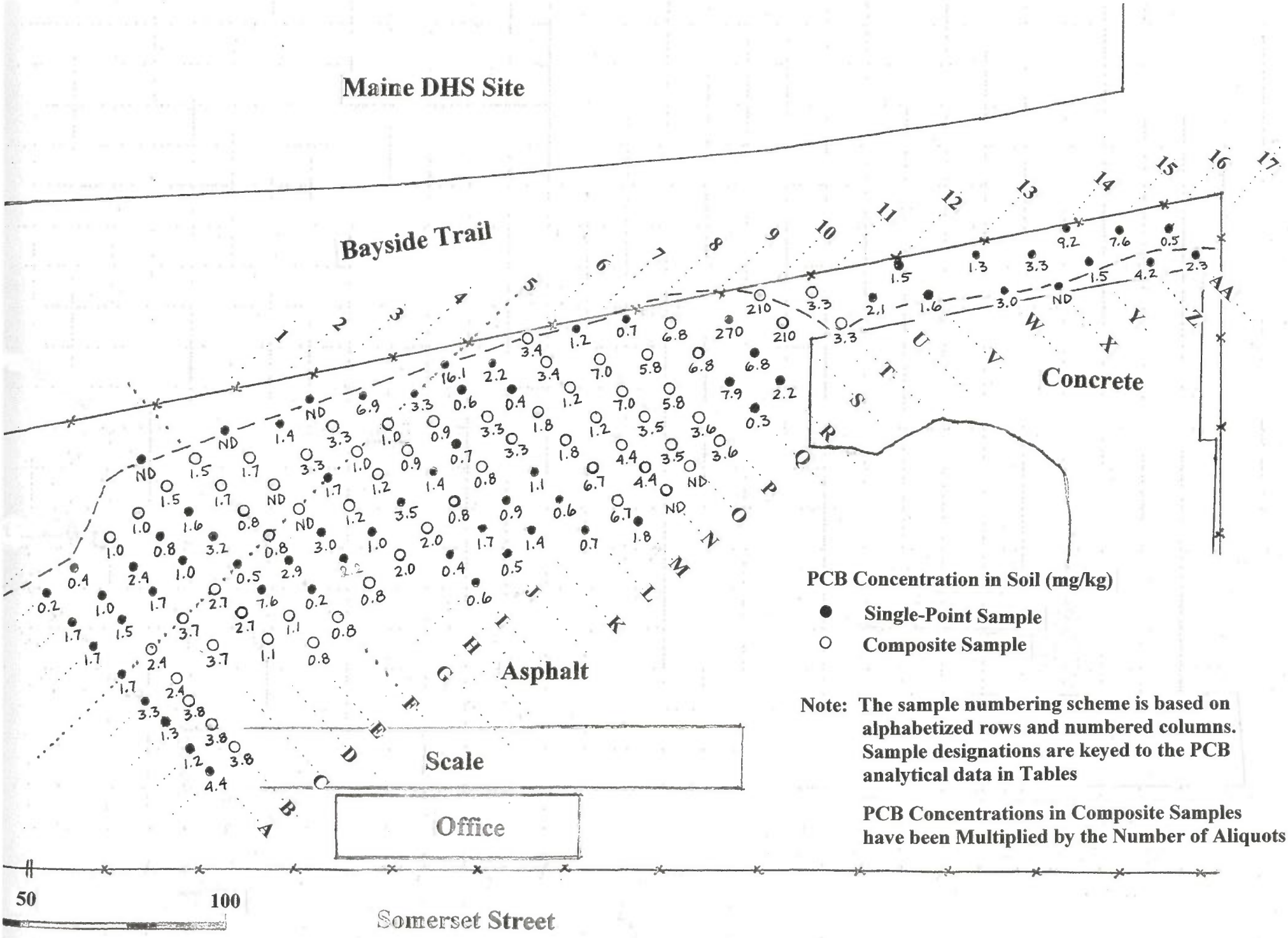


Figure 7 PCB Concentration at Single-Point and Composite Sample Locations

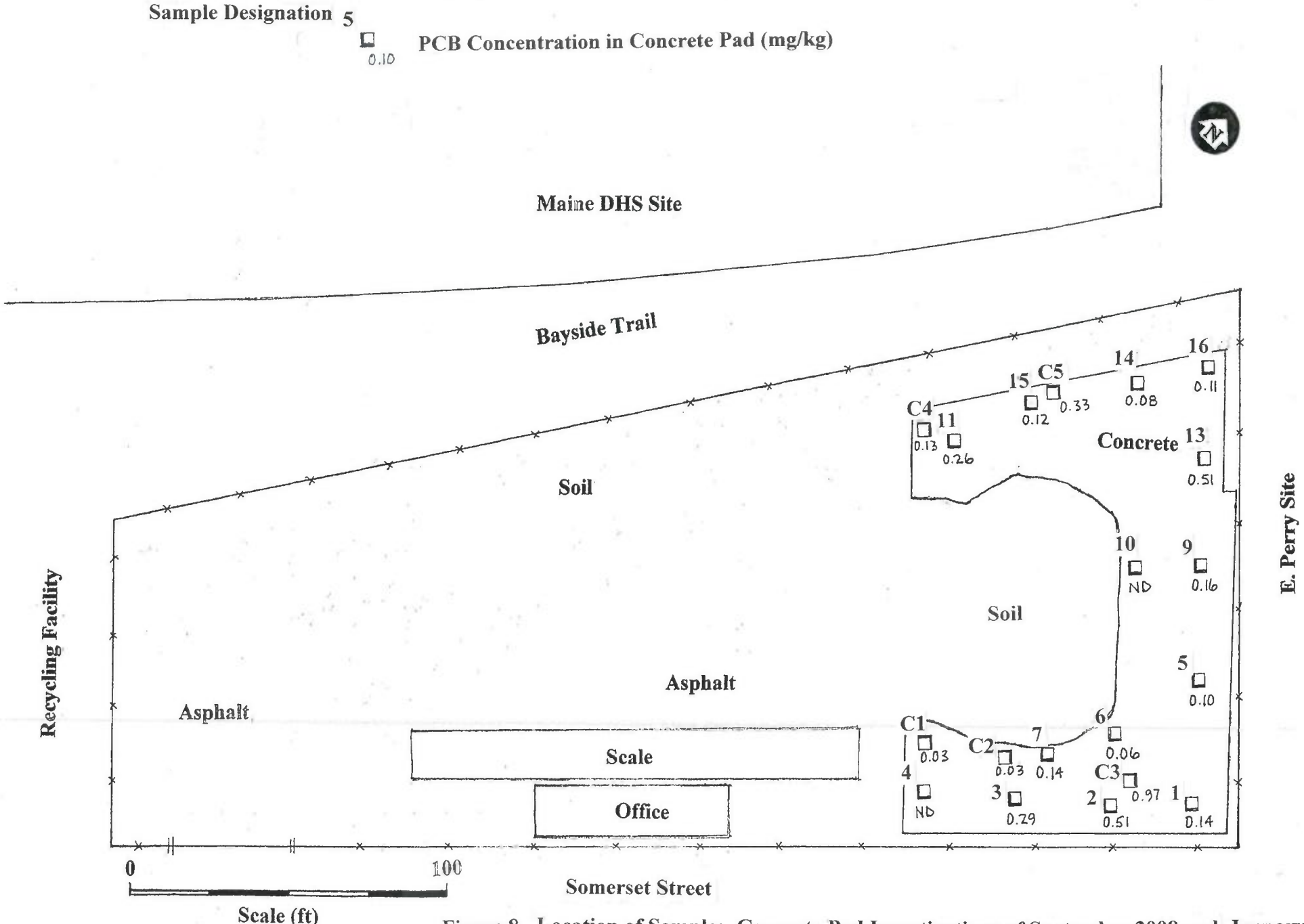


Figure 8 Location of Samples, Concrete Pad Investigations of September 2008 and January 2009

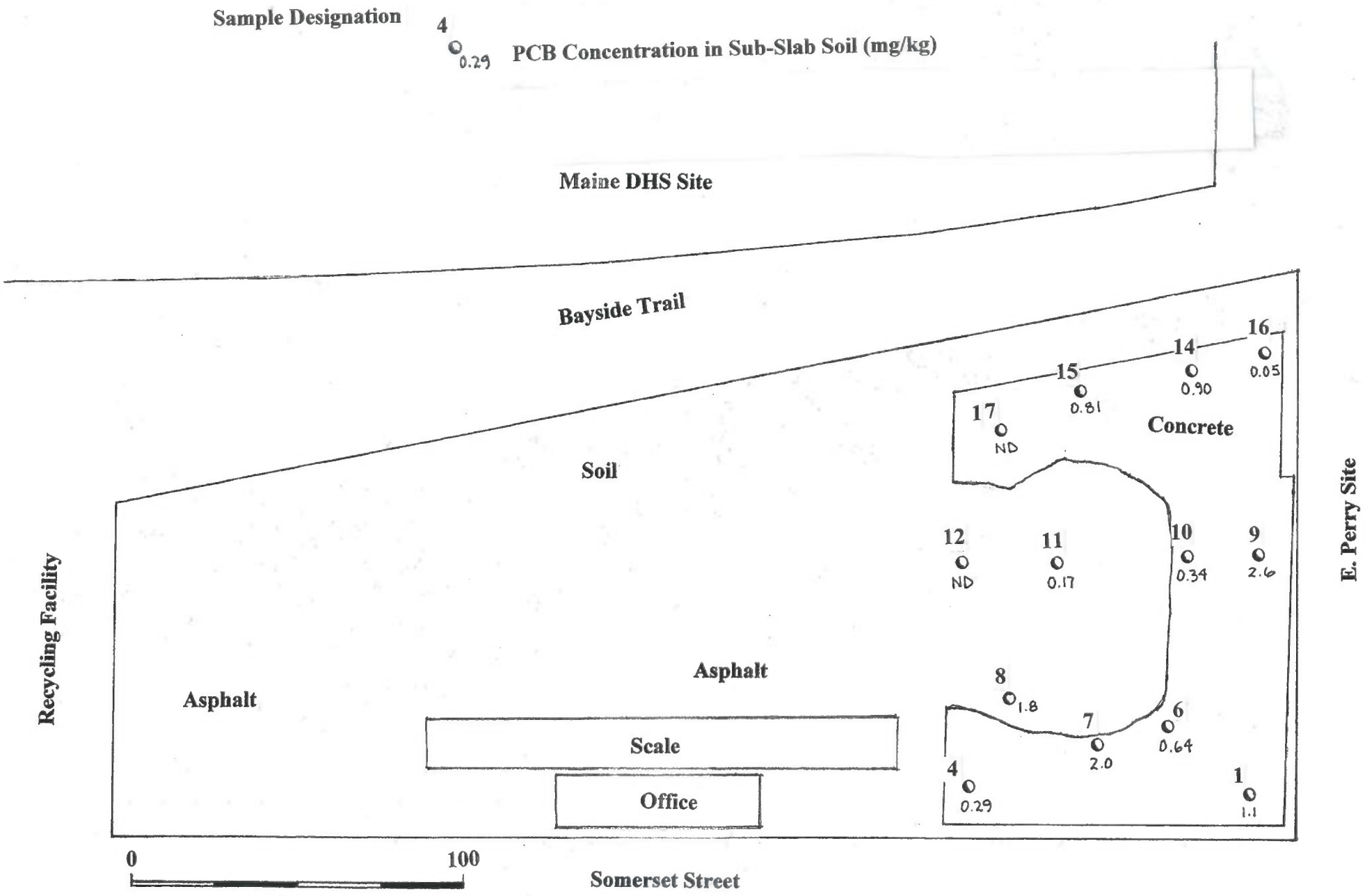


Figure 9 Location of Samples, Sub-Slab Soil Investigation of January 2009

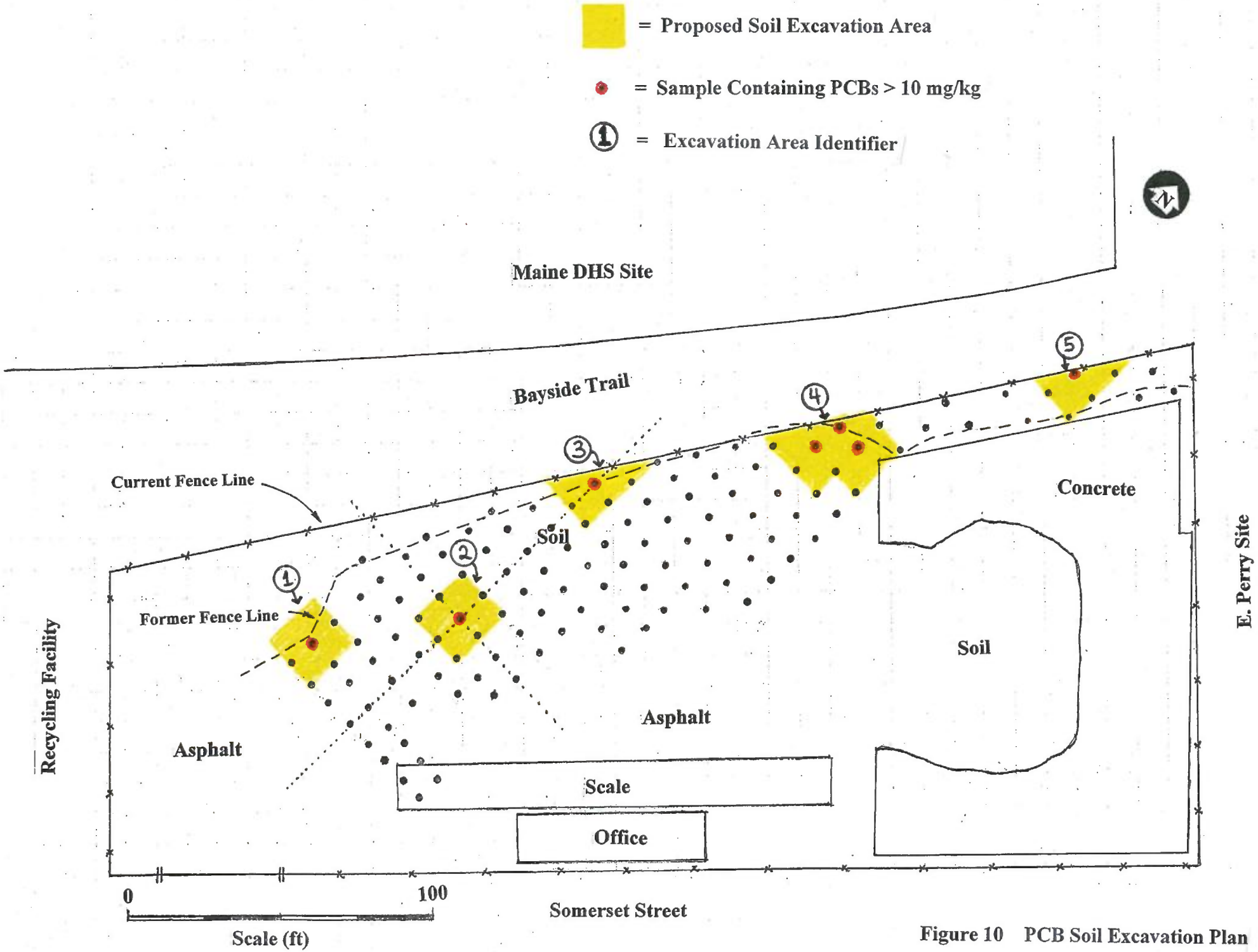
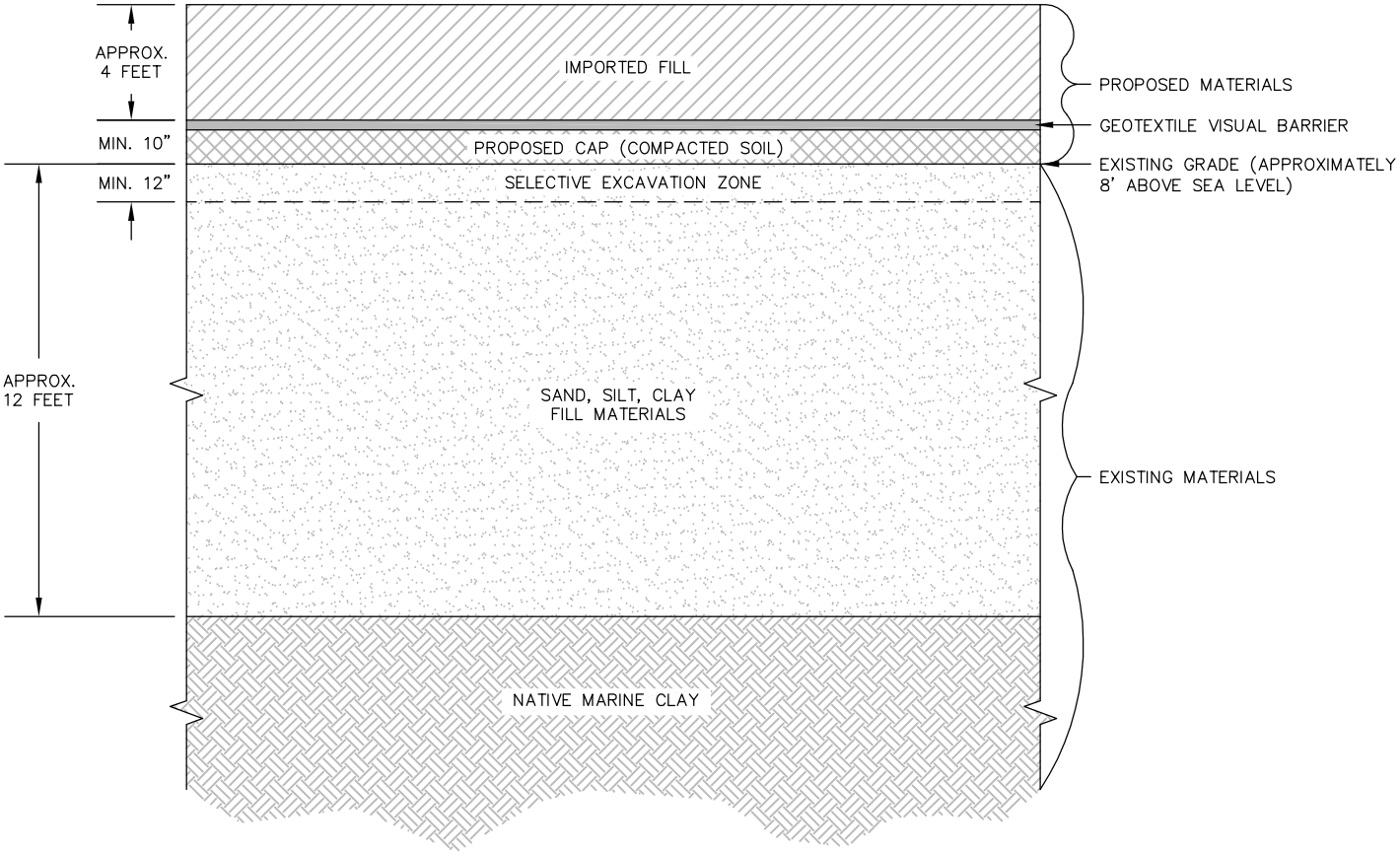


Figure 10 PCB Soil Excavation Plan



WOODARD &CURRAN
41 HUTCHINS DRIVE
PORTLAND, MAINE 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

GROUND SURFACE CROSS-SECTION DETAIL

DESIGNED BY: ALM	CHECKED BY:
DRAWN BY: EVR	Figure 11.dwg

NEMR SITE
PORTLAND, MAINE

REMEDIATION PLAN

JOB NO: 226512
DATE: MARCH 2013
SCALE: NOT TO SCALE

FIGURE 11

APPENDIX A: SITE PHOTOGRAPHS – 2009

Office and Scale at NEMR Somerset Street Site

Metal / Soil Piles at Site

Looking North from West End of NEMR Site

Looking North from Middle of Nemr Site

Looking East at Area of Concrete Pad

Area of **Compactor Machine**

Car Crusher in Northeast Corner of Site

Looking East Along Northern Boundary of Site

APPENDIX B: LIST OF PREVIOUS ENVIRONMENTAL REPORTS

The following list of documents represents the chronological sequence of environmental investigations and reports which include the NEMR site.

- **Site Assessment and Environmental Analysis: Phase I of the Portland Brownfields Project, Portland, Maine,** Tewhey Associates, April 1999.

- **Environmental Remediation Plan, Phase III of the Portland Brownfields Project, Portland, Maine**, Tewhey Associates, November 1998.

- **Soil Analytical Results from New England Metal Recycling (NEMR) Site, 20 Somerset Street, Portland, Maine,** Tewhey Associates, February 20, 2006.

- **Soil and Groundwater Handling Information for Construction Documents, NEMR Site, 20 Somerset Street, Portland, Maine,** Tewhey Associates, October 27, 2006

- **Phase II Soils Investigation, NEMR Site, 20 Somerset Street, Portland, Maine,** Tewhey Associates, February 2007.

- **Concrete Pad Sampling Results from NEMR Site, Portland, Maine,** Tewhey Associates, September 19, 2008.

- **Phase I Environmental Site Assessment, NEMR Site, Portland, Maine** Tewhey Associates, February 2009.

- **Phase II Soils and Concrete Pad Investigation, NEMR Site, Portland, Maine,** Tewhey Associates, February 10, 2009.

- **Phase II Soil Investigation, NEMR Site, Portland, Maine,** Tewhey Associates, July 2009.

- **Phase II Soil Investigation (Rev. 1), NEMR Site, Portland, Maine,** Tewhey Associates, July 2011.

APPENDIX C: VRAP APPLICATION

TEWHEY ASSOCIATES
Environmental Consultants

March 30, 2007

Mr. Nicholas Hodgkins
Maine Department of Environmental Protection (VRAP)
17 State House Station
Augusta, Maine 04333-0017

RE: VRAP Application for New England Metals Recycling Facility, Somerset Street, Portland, Maine

Dear Mr. Hodgkins:

On behalf of the City of Portland and the Portland Brownfields Project, I am pleased to submit a VRAP application for the 0.85-acre New England Metals Recycling Facility at 25 Somerset Street in Portland. Please review the enclosed VRAP application and support materials and call (839-4261) or e-mail (info@tewhey.com) if there are questions or comments concerning the site. I would be pleased to provide escort for a site visit when you are in Portland. We look forward to working with you and your staff on this important Portland Brownfields project.

Very truly yours,

TEWHEY ASSOCIATES

John D. Tewhey
Principal

Attachments: (1) VRAP Application and fee
(2) Phase II Soils Investigation Report w/ Exec. Summary

Cc: Richard Knowland, City of Portland (w/ Atch. 1)
Gary Wood, Esq., City of Portland (w/ Atch 1)
Hope Jacobsen, Esq., Perkins Thompson PA (w/ Atch 1 and 2).

Maine Department of Environmental Protection

Maine Voluntary Response Action Program

Application for Assistance

Please complete this application to request technical assistance from the Voluntary Remedial Action Plan Program (VRAP) pursuant to Title 38 MRSA, Section 342, Subsection 15.

General Site Information

Property name: NEW ENGLAND METAL RECYCLING, INC.

Street Address: 25 SOMERSET STREET

City (or Township): PORTLAND

Tax map #: 25 Lot #: 2B

UTM Coordinates (Map Datum: NAD83): X=601663.377 Y=4834796.212

Total Acreage of Property (all parcels): 0.85 ACRES

Property Description Recorded at Registry of Deeds

County: CUMBERLAND Book: 1649 Page: 110

Applicant Information

Applicant/Organization*: CITY OF PORTLAND, MAINE

Contact Person: RICHARD KNOWLAND Title: SENIOR PLANNER

Address: PLANNING DEPT., PORTLAND CITY HALL, 389 CONGRESS STREET

City: PORTLAND State: MAINE Zip: 04101

Phone: (207) 874-8725 Fax: (207) 756-8258

*The applicant is the individual or organization that will be the recipient of any applicable administrative or liability assurances provided by VRAP. If there are co-applicants to the VRAP, please list on a separate sheet of paper. The applicant is also responsible for payment of the VRAP application fee and reimbursement of Department review and oversight costs.

Current property owner (if different than applicant)

Name: H. FINKELMAN, INC. Title: _____

Organization: c/o G. LARKIN, PROCERIZED NEW ENGLAND CO.

Address: P.O. BOX 48, 48 ROVER STREET

City: EVERETT State: MA Zip: 02149

Phone: (617) 389-8300 Fax: (617) 389-8030

Is or has the project been involved with other DEP regulatory programs?

____ Yes

__✓__ None known

If yes, list the program/contact person from the Department: _____

_____

Contact person(s)

Please list the name(s) of your current environmental consultant and legal counsel.

Consultant: JOHN D. TEWHEY of TEWHEY ASSOCIATES

Address: P.O. BOX 238

City: GORHAM State: MAINE Zip: 04038

Phone: (207) 839-4261 Fax: (207) 839-3834

Attorney: GARY WOOD of CITY OF PORTLAND

Address: CORPORATION COUNSEL, PORTLAND CITY HALL, 389 CONGRESS ST.

City: PORTLAND State: MAINE Zip: 04101

Phone: (207) 874-8480 Fax: (207) 874-8497

Certification

I hereby make a request of VRAP to assist me and the company/organization I represent in determining whether the above-described property has been the site of a release or threatened release of a hazardous substance, hazardous waste, hazardous matter, special waste, pollutant or contaminant, including petroleum products or by-products. I understand this assistance may include the review of agency records and files, and review and approval of my investigation plans and reports as well as remedial action plans and implementation.

I am aware that VRAP, at its discretion, may contact municipal officials regarding investigation/remedial actions at sites participating in the program.

I am aware that I must reimburse VRAP for the costs of providing this assistance. I understand that reimbursement requests may be made on a periodic basis and that failure to reimburse VRAP for costs in a timely manner may result in disqualification from VRAP. I also understand that final certification from the VRAP may not be issued until I have reimbursed the VRAP for its costs.

Typed/printed name: JOHN D. TEWHEY Title: AGENT

Signature:  Date: MARCH 30, 2007

APPENDIX D: LABORATORY ANALYTICAL DATA AND SOPS

APPENDIX D

Laboratory analytical reports and standard operating procedure documents have been intentionally omitted from this electronic submittal due to the size of the files. These documents are included in CD format with hard copy versions of this plan.

APPENDIX E: CERTIFICATION

CERTIFICATION

The City of Portland, Maine ("City"), owner of the 0.85-acre property identified as the former New England Metal Recycling ("NEMR") facility located at 25 Somerset Street in Portland, Maine ("Site"), provides the following certification in accordance with 40 CFR 761.61(a)(3)(i)(E):

> The City certifies that all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental / chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site are on file at the location designated in this certificate and are available for EPA inspection.

Document Location

City of Portland Planning Division
Portland City Hall, Fourth Floor
389 Congress Street
Portland, Maine 04101

Property Owner and Party Conducting the Cleanup

City of Portland
389 Congress Street
Portland, Maine 04101

Authorized Representative of Property Owner and Party Conducting the Cleanup

Gregory A. Mitchell, Director
Economic Development Department

Gregory A. Mitchell

Authorized Signature

3-29-13

Date

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS